REMARKS/ARGUMENTS

<u>35 USC §103(a) - Claim 1</u>

Independent claim 1 is rejected in the current Office Action under §103(a) over the combination of Shu (US 5,594,839) in view of Schmidt (US 5,193,012) and Hashimoto (US 4,999,814). Of note in this rejection is that Hashimoto is contended as teaching the feature of *"steps (a) to (c) are performed simultaneously with step (d)"*.

Applicant respectfully disagrees that the above combination of Shu, Schmidt, and Hashimoto teach the claimed invention, particularly with regards to the feature of *"steps (a) to (c) are performed simultaneously with step (d)"*. Applicant's reasoning is as follows.

It is respectfully submitted that the Examiner has misunderstood the teachings of Hashimoto. In asserting that the combination of references teaches the feature of *"steps (a) to (c) are performed simultaneously with step (d)"*, the Examiner refers to Hashimoto at col. 6, lines 31 - 40. Having reviewed the entirety of Hashimoto, however, it is clear to Applicant that the "simultaneous" feature of Hashimoto refers not to a simultaneity between reading and writing data from/into the line buffers. Rather, the simultaneity achieved in Hashimoto is in being able to simultaneously perform a read or a write while the DRAM memory is being refreshed.

This is clear firstly when the description at col. 6, lines 31 - 40, is read in its entirety. Col. 6, lines 31 - 40 states that *"simultaneous generation of write, read, and refresh request signals can be accommodated **without interrupting data read out from said read line buffer memory to perform a refresh** of said dynamic memory cells of said dynamic memory array…"* . This is further clear from the description at col. 3, lines 14 - 22, where it is described that *"If line buffers are built in…and if necessary data is…read…serially through a line buffer…, **there will be no practical difficulty in reading data…if a read request signal is generated during the refresh mode…"***.

Applicant further directs the Examiner to the description at col. 3, lines 26 - 29, where it is stated *"For example, if write, refresh and read requests to write, refresh and read, respectively, data in the dynamic memory are generated simultaneously for execution **<u>in this order</u>**, necessary data will always have been written in the read line buffer 900 nsec later."*. This description makes it clear that the "simultaneous" event that Hashimoto refers to is <u>not</u>

a simultaneity between read, write, and external refresh operations. This is the only logical conclusion in view of the fact that on the one hand the above description refers to the simultaneous generation of write, refresh and read requests, and on the other hand the above descriptions states that the write, refresh, and read requests are executed in this order.

From the above descriptions of Hashimoto, Applicant respectfully submits that the alleged feature of "simultaneity" relied upon by the Examiner is in fact a simultaneity between a read/write/external refresh request and an ongoing refresh operation. Hashimoto does not teach or suggest a simultaneous performance of steps (a) - (c) with step (d).

Specifically, Hashimoto does not teach or suggest reading a plurality of dither values from a dither matrix, updating the start position in the dither matrix, and outputting a full line of dither values, simultaneously with outputting a full line of dither values from the buffer memory. More importantly, Hashimoto does not allow for the simultaneous performance of steps (a) - (c) with step (d) taking into account that step (d) requires that a **full line** of dither values be output after a full line of dither values has been output into the buffer memory. In fact, Hashimoto would fail to serve its intended purpose if the device of Hashimoto were made to wait until a full of dither values is output into the buffer memory before outputting a full line of dither values from the buffer memory; since in this case, simultaneity between read/write/refresh signal requests and an ongoing refresh operation would clearly not be possible.

In view of the above clarification of Hashimoto, it becomes clear that a combination of Shu and Schmidt with Hashimoto still would not arrive at the invention of claim 1, and accordingly, that claim 1 is novel and inventive.

Applicant takes this opportunity to respectfully note the guidelines for conducting searches, as provided under MPEP 904.03. It is stated here that it is a prerequisite to a speedy and just determination of the issues involved in the examination of an application that a careful and comprehensive search, commensurate with the limitations appearing in the most detailed claims in the case, be made in preparing the first action on the merits so that the second action on the merits can be made final or the application allowed with no further searching other than to update the original search.

Favorable reconsideration of the application in light of the above amendments and remarks is earnestly sought. Applicant looks forward to word of further official communication in due course.

Very respectfully,

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